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ABSTRACT

Experimental results indicate that: (1) the Teaching Situation Reaction Test has potential for predicting inservice social studies teachers' verbal and cognitive classroom behavior patterns; and (2) these patterns are related to current developments in social studies instruction. (MS)

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Predicting Social Studies Teacher Behavior

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Introduction

The purpose of this investigation was to explore the effectiveness of the Teaching Situation Reaction Test (T.S.R.T.) as a predictor of in-service social studies teachers verbal and cognitive classroom behavior patterns.

The T.S.R.T.[1] was developed as a paper-and pencil test for the purpose of assessing the effectiveness of pre service education experiences. The test is a forced choice instrument in which the testee is asked to respond to a classroom situation by ranking a test of 48 items with four possible solutions for each item. The classroom situations involve such aspects of teaching as planning, classroom management, and teacher-pupil relationships.

The overall situation presented to the testee is essentially this.

> You have been employed by a school system which is engaged in a series of experimental studies. One of these studies involves a class designed to improve pupils' general adjustment to their environment. A heterogeneous group (physically, mentally, socially) of twenty-five thirteen to fourteen year-old youngsters have signed up for this class entitled "Teen Topics" because they thought it would be interesting.
>
> The class is scheduled to meet the last period of the day on Tuesday and Thursday during the second semester. Arrangements have been made so that the class might take trips and students might meet informally with the teacher after class.
>
> You have accepted the principal's invitation to take this class. You have been given pretty much of a free hand to develop the course. You have a teacher-counselor to help you and a good supply of instructional materials available. Studies will be made of the personal adjustment gains evidenced by a selected number of your twenty-five students.

A sample item is.

> You will have your first meeting with the group tomorrow.
>
> It will be important that you have planned for
>
> (a) students to get well acquainted with each other.
> (b) explaining your grading system.
> (c) activities to catch student interest.
> (d) explaining your complete program for the semester.

The T.S.R.T. is scored by conceiving each item of the test with its four options to be an item composed of six paired options. When the options are lettered a, b, c, and d and keyed in this order, the six possible pairs are ab, ac, ad, bc, bd, and cd.

The T.S.R.T. has demonstrated predictive validity at significant levels (.05) in five of six studies of pre-service teachers. The test-retest reliability in two studies remained consistent at .84. Two studies of fake-resistance yielded data to support the belief that students cannot fake their responses and improve their scores. Sample size for these studies has ranged from N=21 to N=106. Studies of the construct validity have demonstrated relationships between factors measured by the Dogmatism Scale, Relationship Inventory, the Minnesota Teacher Attitude Inventory, the California Test of Mental Maturity, F Scale, and the intraception scale of the Edwards Personal Preference Scale on samples ranging from N=51 to N=238.

These previous reports of T.S.R.T. research reported at the annual meetings of the American Educational Research Association in 1965[2], 1966[3], and 1968[4] indicate that the T.S.R.T. gives clear evidence of promise as a research tool in the study of pre-service teacher education. However, due to recent publicity, information concerning the instrument has been requested by several public school districts for use in in-service projects and the present investigation is an attempt to explore the predictive validity of the instrument with in-service secondary social studies teachers.

Hypotheses

Stated in the null form the hypotheses tested in this investigation were:

Hypothesis I There will be no difference between the observed verbal teaching behaviors (as measured by the Observational System for the Analysis of Classroom Instruction) of two groups of in-service social studies teachers (selected as a result of scores on the T.S.R.T.).

Hypothesis 2 There will be no difference between the observed cognitive teaching behaviors (as measured by the Florida Taxonomy of Cognitive Behavior) of two groups of in-service social studies teachers (selected as a result of scores on the T.S.R.T.).

Hypothesis 3 There will be no difference between the observed cognitive behavior of the students (as measured by the Florida Taxonomy of Cognitive Behavior) of two groups of in-service social studies teachers (selected as a result of scores on the T.S.R.T.).

Procedure

The T.S.R.T. was administered during the first two weeks of January, 1971, to a parent population of sixty secondary social studies teachers located in the North Central Region of West Virginia. The teachers were placed in rank order from highest to lowest as a result of scores on the T.S.R.T. and the sample for this study consisted of those thirty social studies teachers who comprised the upper and lower quartiles of scores on the T.S.R.T.

The variables that were dependent in this study were verbal classroom behaviors as measured by the Observational System for the Analysis of Classroom Behavior (O.S.A.C.I.)[5] and cognitive behavior in the classroom as measured by the Florida Taxonomy of Cognitive Behavior (F.T.C.B.).[6].

The O.S.A.C.I. is a 16-category modification of the Flanders system of verbal interaction analysis. The modifications consist of the following additional categories: (1) teacher response to student questions; (2) corrective feedback; (3) student questions; (4) teacher directed activity; (5) teacher demonstration; and (6) silence and contemplation. Categorizing procedures for the instrument are similar to those utilized with the Flanders system and consist of categorizing tallies at each three second interval for the observation. Then, the tallies are plotted into a matrix which allows the researcher to look at the sequencing of the verbal behavior he has recorded.

The F.T.C.B. is an observational instrument consisting of fifty-five items which describe cognitive behavior that can be evidenced by both pupils and teachers in classroom situations. It is the task of an observer to identify and record these behaviors as they occur within specified time periods. There are five separate six-minute recording periods in each thirty minute observation. The observer records behavior as it occurs, checking each item of teacher behavior and student behavior in the appropriate column as it happens. A particular item is marked only once in a given six minute period, no matter how often that specific behavior occurs. If a behavior is represented by more than one item, all items that are involved are checked. At the end of the thirty minute period, the recorded teacher behaviors and pupil behaviors are tallied to produce a record of the cognitive activities which have taken place during the observation.

All classroom behavior data describing the dependent variables were collected by three trained observers who had previously received special training in the use of the O.S.A.C.I. and the F.T.C.B. Inter-observer reliability and consistency were above .80.

Each of the thirty social studies teachers were observed on five occasions for data collection purposes during the second semester of the 1970-71 school year and the collected data were then used to test the stated hypotheses. A Mann-Whitney U Test was employed to test the differences between the ranks of the two groups. The U statistic is one of the most powerful of the nonparametric tests and it is a most useful alternative to the parametric t test when the t test assumptions are not met.

The U test statistical treatment resulted in U values which were then examined to determine if the difference between the ranks of the subjects, as reflected by the U values, were enough to be significantly different. The pre determined level at which a difference would be considered significant was the .05 level of significance.

RESULTS

In regard to hypothesis one, concerning verbal teaching behaviors, findings reported in Table I indicate that the social studies teachers who ranked high on the T.S.R.T. differed significantly from the low ranked teachers by exhibiting more: (1) praise and encouragement (2) acceptance and utilization of student ideas: (3) questioning behavior; (4) situations that encouraged emitted student talk; (5) silence and contemplation (6) indirect teacher talk; (7) more motivating teacher talk; and by exhibiting less; (8) confusion and irrelevant behavior; and (9) directed activity and practice.

Table II presents the findings related to cognitive teaching behaviors. The secondary social studies teachers who ranked high on the T.S.R.T. differed significantly from the low ranked teachers by exhibiting more behavior classified as knowledge of universals, analysis, synthesis, and evaluation.

When considering student cognitive behavior, Table III shows that the students of the social studies teachers who ranked high on the T.S.R.T. differed significantly from the students of the low ranked teachers in the cognitive areas of knowledge of universals, translation, application, analysis, synthesis, and evaluation.

DISCUSSION

The data seems to suggest that the T.S.R.T. has potential for predicting in-service social studies teacher behavior in the areas of verbal and cognitive behavior. In addition, the verbal and cognitive classroom patterns are related to current developments in social studies instruction, i.e., conceptual approaches, questioning strategies, student involvement, inquiry or discovery approaches.

TABLE I

U-TEST OF THE HIGH AND LOW RANKED TEACHERS
ON THE CATEGORIES OF THE O.S.A.C.I.

Category	U'	U-Value	Significance P
1	157.5	67.5	N.S.
2	199.0	26.0	.002
3	211.0	14.0	.002
4	186.0	39.0	.002
5	159.0	69.0	N.S.
6	117.0	103.0	N.S.
7	104.0	121.0	N.S.
8	122.0	108.0	N.S.
9	148.0	76.5	N.S.
10	138.0	89.0	N.S.
11	213.0	12.0	.002
12	151.0	74.0	N.S.
13	170.0	49.0	.02
14	187.0	58.0	.05
15	123.0	102.0	N.S.
16	170.5	54.5	.02
I/D Ratio	214.0	11.0	.002
Rev. I/D Ratio	214.0	11.0	.002
Dir. Stud. Talk	160.0	65.0	N.S.

TABLE II

U-TEST OF THE HIGH AND LOW RANKED TEACHERS
ON THE CATEGORIES OF THE F.T.C.B.

Category	U'	U-Value	Significance P
1.10	120.0	105.0	N.S.
1.20	117.0	108.0	N.S.
1.30	188.5	56.5	.05
2.00	150.5	74.5	N.S.
3.00	155.5	69.5	N.S.
4.00	160.5	64.5	N.S.
5.00	211.5	13.5	.002
6.00	166.5	58.5	.05
7.00	166.5	58.5	.05

TABLE III

U-TEST OF THE STUDENTS OF THE HIGH AND LOW RANKED TEACHERS
ON THE CATEGORIES OF THE F.T.C.B.

Category	U'	U-Value	Significance P
1.10	117.0	108.0	N.S.
1.20	114.0	111.0	N.S.
1.30	172.0	53.0	.02
2.00	162.5	62.5	.05
3.00	160.0	65.0	N.S.
4.00	187.5	37.5	.002
5.00	201.0	24.0	.002
6.00	201.0	24.0	.002
7.00	187.0	38.0	.002

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